JAP15 Rec'd PCT/PTO 11 AUG 2006

PTO-1390 (Rev. 07-2005) Approved for use through 3/31/2007. OMB 0651-0021 U.S. Patent and Trademark Office; U.S. DEPARTMNT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. ATTORNEY'S DOCKET NUMBER TRANSMITTAL LETTER TO THE UNITED STATES 421/96 PCT/US DESIGNATED/ELECTED OFFICE (DO/EO/US) TION NO (If known, see 37 CFR 1.5) **CONCERNING A SUBMISSION UNDER 35 U.S.C. 371** INTERNATIONAL FILING DATE PRIORITY DATE CLAIMED INTERNATIONAL APPLICATION NO. 02/13/2004 PCT/US2005/004421 02/14/2005 TITLE OF INVENTION: FUNCTIONAL MATERIALS AND NOVEL METHODS FOR THE FABRICATION OF MICROFLUIDIC DEVICES APPLICANT(S) FOR DO/EO/US THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL, North Carolina State University, Joseph M. DeSimone, Jason P. Rolland, Ginger Denison Rothrock Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information: 1. X This is a FIRST submission of items concerning a submission under 35 U.S.C. 371. This is a SECOND or SUBSEQUENT submission of items concerning a submission under 35 U.S.C. 371. This is an express request to begin national examination procedures (35 U.S.C. 371 (f)). The submission must include items (5), (6), (9) and (21) indicated below. The US has been elected (Article 31). A copy of the International Application as filed (35 U.S.C. 371 (c)(2)) is attached hereto (required only if not communicated by the International Bureau). has been communicated by the International Bureau. c. X is not required, as the application was filed in the United States Receiving Office (RO/US). An English language translation of the International Application as filed (35 U.S.C. 371 (c)(2)). is attached hereto. has been previously submitted under 35 U.S.C. 154(d)(4). 7. | X | Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) are attached hereto (required only if not communicated by the International Bureau). have been communicated by the International Bureau. have not been made; however, the time limit for making such amendments has NOT expired. have not been made and will not be made. An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)). An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). An English language translation of the annexes of the International Preliminary Examination Report under PCT 10. Article 36 (35 U.S.C. 371(c)(5)). Items 11 to 20 below concern document(s) or information included: An Information Disclosure Statement under 37 CFR "Express Mail" mailing number_ED775633867 US An assignment document for recording. A separate A preliminary amendment. 13. Postal Service "Express Mail to Addressee" service under 37 C.F.R. 1.10 on the date indicated above and is addressed to the Commissioner for Patents, P.O. Box

This collection of information is required by 37 CFR 1.414 and 1.491-1.492. The information is required to obtain or retain a benefit by the public, which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 15 minutes to complete, including gathering information, preparing, and submitting the completed form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop PCT, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).

A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.

A second copy of the published International Application under 35 U.S.C. 154(d)(4).

1450, Alexandria, VA 22313-1450,

Staci H. Absuell

Stacie H. Boswell

An Application Data Sheet under 37 CFR 1.76.

A power of attorney and/or change of address letter

A substitute specification.

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U.S. APPLICATION NO. 6f known see:37 CFR 1.5)		INTERNATIONAL APPLICATION NO. PCT/US2005/004421			ATTORNEY'S DOCKET NUMBER 421/96 PCT/US				
20. Other items or information: Copy of Amendment Pursuant to PCT Article 34 filed May 26, 2005 with Chapter II Demand									
	•			•					
The follow	ing fees ha	ve been so	bmitted				CALCULATIONS	PTO USE ONLY	
21. X Basic	e (37 CRF	1.492(a))		• • • •	\$300	\$ 300			
If the written opin	ination fee ion prepare 'US indicate								
All other situations							\$ 200		
23. X Search fee (37 CFR 1.492(b)) If the written opinion of the ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of the PCT Article 33(1)-(4)									
International Searching Authority									
							\$ 100		
7 th other chadion			L OF 21, 22 and				\$ 600		
Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing IN COMPLIANCE WITH 37 cfr 1.821(c) or (e) or computer program listing in an electronic medium) (37 CFR 1.492(j)). The fee is \$250 for each additional 50 sheets of paper or fraction thereof. Total Sheets Extra sheets Number of each additional 50 or fraction RATE									
10141 0110010	Extra director		thereof (round up to a whole number)						
151 -100 =	51	/50 =	2		× \$250	\$ 500			
Surcharge of \$130.00 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of the commencement of the national stage (37 CFR 1.492(h)).							\$ 0		
CLAIMS	CLAIMS		BER FILED	NUMBER EXTRA RATE		RATE	\$		
Total claims		238 - 20 =		218	Х	\$50	\$10,900		
Independent claim	Independent claims		2 - 3 =	9	Х	\$200	\$1,800		
MULTIPLE DEPENDENT CLAIM(S) (if applicable) + \$360							\$ 0		
TOTAL OF ABOVE CALCULATIONS =							\$13,800		
Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by ½.							\$13,800		
SUBTOTAL =							\$13,800		
Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).							\$ 0		
TOTAL NATIONAL FEE =							\$13,800		
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +						\$ 0			
TOTAL FEES ENCLOSED =							\$13,800		
							Amount to be refunded:	\$	
							Amount to be charged:	\$	

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a. X A check in the amount of \$ 13,800.00 to cover the above fees is enclosed.									
b. Please charge my Deposit Account No in the amount A duplicate copy of this sheet is enclosed.	of \$ to cover the above fees.								
	The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 50-0426								
Fees are to be charged to a credit card. WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.									
NOTE: Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status.									
SEND ALL CORRESPONDENCE TO:	My a. Jan, J. 11-04-2006								
	SIGNATURE:								
	Arles A. Taylor, Jr. NAME								
	39,395								
	REGISTRATION NUMBER								
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